

REMARKS

The Final Office Action mailed May 18, 2010, has been carefully reviewed, and the following remarks are made in consequence thereof.

Claims 1-10 are now pending in this application. Claims 1-10 are rejected.

The rejection of Claims 1-10 under 35 U.S.C. § 103(a) as being unpatentable over Collet et al. (U.S. Patent No. 6,811,118) (hereinafter referred to as "Collet") in view of Schott (U.S. Patent No. 3,504,406) (hereinafter referred to as "Schott"), Derrien (U.S. Patent No. 5,288,037) (hereinafter referred to as "Derrien"), or Jacobson (U.S. Patent No. 2,881,021) (hereinafter referred to as "Jacobson") is respectfully traversed.

Collet describes a latch device 10 for latching an aircraft landing gear. Latch device 10 includes a hook 12 that engages a nut 50, and a locking lever 14 that is coupled to hook 12 via a spring 20. Locking lever 14 includes a wheel 25 that is maintained in contact with a top portion 23 of hook 12. During an unlocking operation, an electromagnet 100 displaces a pusher 104 that pushes against an appendix 37 of locking lever 14. Locking lever 14 pivots clockwise about an axis 15 and hook 12 pivots counterclockwise about an axis 13. As hook 12 and locking lever 14 pivot, wheel 25 maintains contact with top portion 23 of hook 12. Hook 12 disengages nut 50 and nut 50 is released. Notably, Collet does not describe nor suggest a locking mechanism including a cam that includes a peripheral cam surface engageable with a part of a latch member such that a radial distance between a third axis and the cam surface engaged with the part of the latch member increases as the cam is rotated by a rotary actuator.

Schott describes a latch mechanism for use in retaining a latching finger 1. While in a latched position, latching finger 1 is retained by a retaining member 3. A locking unit 5 maintains retaining member 3 in engagement with latching finger 1. A hydraulic jack 9 disengages locking unit 5 from retaining member 3, and a spring-activated push piece 10 reengages locking unit with retaining member 3. Notably, Schott does not describe nor suggest a locking mechanism including a cam that includes a peripheral cam surface engageable with a part of a latch member such that

a radial distance between a third axis and the cam surface engaged with the part of the latch member increases as the cam is rotated by a rotary actuator.

Derrien describes a catch device 100 for retaining an aircraft landing gear. A hinged hook 102 rotates about a pin 103 to engage the landing gear via a wheel 104. A drive shaft 113 of a motor drives a linkage 112 that is coupled to a locking lever 106. Drive shaft 113 and linkage 112 pivot locking lever 106 about a second pin 107 to engage hinged hook 102. In an emergency, an independent trigger 130 pivots locking lever 106 away from hinged hook 102 to release hinged hook 102. Notably, Derrien does not describe nor suggest a locking mechanism including a cam that includes a peripheral cam surface engageable with a part of a latch member such that a radial distance between a third axis and the cam surface engaged with the part of the latch member increases as the cam is rotated by a rotary actuator.

Jacobson describes a latch mechanism for use with a door. In one embodiment, the latch mechanism includes a keeper roller 11 that is rotatable about a pin 12 that is coupled between two plates 13. The latch mechanism also includes a bolt member 14 that pivots about a pin 15. A member 20 extends between two walls of bolt member 14 and pivots about pin 15. A spring 19 is coupled to member 20 and to a web portion 16' of bolt member 14. Spring 19 rotates bolt member 14 in a counterclockwise direction with respect to member 20. A keeper-engaging member 30 retains keeper roller 11 in a latched position. Keeper-engaging member 30 is retained in the latched position by a roller 17 coupled to bolt member 14. As bolt member 14 is rotated by spring 19, keeper-engaging member 30 is released from engagement by roller 17 such that keeper roller 11 may be released from keeper-engaging member 30. Notably, Jacobson does not describe nor suggest a locking mechanism including a cam that includes a peripheral cam surface engageable with a part of a latch member such that a radial distance between a third axis and the cam surface engaged with the part of the latch member increases as the cam is rotated by a rotary actuator.

Claim 1 recites a “locking mechanism for engaging and retaining a movable member, wherein the mechanism includes a hook member mounted for angular displacement about a first axis such that the hook member is movable into and out of retaining engagement with the movable member, a latch member mounted for angular

displacement about a second axis parallel with the first axis, the latch member having a portion thereof spaced from the second axis, which can be located to prevent movement of the hook member out of retaining engagement with the movable member, and first and second actuators operable to rotate the latch member about the second axis such that the portion is movable to a position where it does not prevent movement of the hook member out of retaining engagement with the movable member, and that the second actuator is a rotary actuator and includes a cam arranged for rotation about a third axis parallel to the second axis and located to engage a part of the latch member, wherein the cam includes a peripheral cam surface engageable with the part of the latch member such that a radial distance between the third axis and the cam surface engaged with the part of the latch member increases as the cam is rotated by the rotary actuator, and wherein the hook member includes an angled contact surface configured to contact the portion of the latch member such that a force applied by the contact surface to the portion of the latch member rotates the portion into engagement with the hook member and limits a rotation of the hook member.

No combination of Collet, Schott, Derrien, and Jacobson describes nor suggests a locking mechanism as is recited in Claim 1. More specifically, no combination of Collet, Schott, Derrien, and Jacobson describes nor suggests a locking mechanism including a cam that includes a peripheral cam surface engageable with a part of a latch member such that a radial distance between a third axis and the cam surface engaged with the part of the latch member increases as the cam is rotated by a rotary actuator. Rather, in contrast to the present invention, Collet describes a locking lever having a wheel that maintains contact with a hook, Schott describes a latch mechanism wherein a hydraulic jack disengages a locking unit from a retaining member, Derrien describes a catch device wherein an independent trigger pivots a locking lever away from a hinged hook to release the hinged hook, and Jacobson describes a latch mechanism for a door wherein a bolt member is rotated by a spring to release a keeper-engaging member from a roller. Accordingly, for at least the reasons set forth above, Claim 1 is submitted as being patentable over Collet in view of Schott, Derrien, and Jacobson.

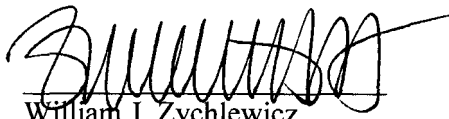
Claims 2-10 depend from independent Claim 1. When the recitations of Claims 2-10 are considered in combination with the recitations of Claim 1, Applicant

respectfully submits that dependent Claims 2-10 likewise are patentable over Collet in view of Schott, Derrien, and Jacobson.

For at least the reasons set forth above, Applicant respectfully requests that the rejection of Claims 1-10 under Section 103 be withdrawn.

In view of the foregoing remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'William J. Zychlewicz', written over a horizontal line.

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